RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,235

DATE: 01/04/2001
TIME: 09:01:20

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\I674235.raw

```
 3 <110> APPLICANT: Sagami Chemical Research Center
 5 <120> TITLE OF INVENTION: Human Proteins Having Transmembrane Domains and DNAs Encoding these
 6        Proteins
 8 <130> FILE REFERENCE: 661099
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/674,235
C--> 11 <141> CURRENT FILING DATE: 2000-05-19
13 <150> PRIOR APPLICATION NUMBER: JP 10-119395
14 <151> PRIOR FILING DATE: 1998-04-28
16 <160> NUMBER OF SEQ ID NOS: 36
18 <170> SOFTWARE: Windows 95 (Word 98)
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 268
23 <212> TYPE: PRT
24 <213> ORGANISM: Homo sapiens
26 <400> SEQUENCE: 1
27 Met Ala Phe Glu Glu Leu Leu Ser Gln Val Gly Gly Leu Gly Arg Phe
28  1               5                  10                 15
29 Gln Met Leu His Leu Val Phe Ile Leu Pro Ser Leu Met Leu Leu Ile
30                 20                 25                 30
31 Pro His Ile Leu Leu Glu Asn Phe Ala Ala Ala Ile Pro Gly His Arg
32             35                 40                 45
33 Cys Trp Val His Met Leu Asp Asn Asn Thr Gly Ser Gly Asn Glu Thr
34       50                 55                 60
35 Gly Ile Leu Ser Glu Asp Ala Leu Leu Arg Ile Ser Ile Pro Leu Asp
36  65                 70                 75                 80
37 Ser Asn Leu Arg Pro Glu Lys Cys Arg Arg Phe Val His Pro Gln Trp
38                 85                 90                 95
39 Gln Leu Leu His Leu Asn Gly Thr Ile His Ser Thr Ser Glu Ala Asp
40                 100                105                110
41 Thr Glu Pro Cys Val Asp Gly Trp Val Tyr Asp Gln Ser Tyr Phe Pro
42             115                120                125
43 Ser Thr Ile Val Thr Lys Trp Asp Leu Val Cys Asp Tyr Gln Ser Leu
44       130                135                140
45 Lys Ser Val Val Gln Phe Leu Leu Leu Thr Gly Met Leu Val Gly Gly
46  145                150                155                160
47 Ile Ile Gly Gly His Val Ser Asp Arg Trp Leu Val Glu Ser Ala Arg
48             165                170                175
49 Trp Leu Ile Ile Thr Asn Lys Leu Asp Glu Gly Leu Lys Ala Leu Arg
50             180                185                190
51 Lys Val Ala Arg Thr Asn Gly Ile Lys Asn Ala Glu Glu Thr Leu Asn
52       195                200                205
53 Ile Glu Val Val Arg Ser Thr Met Gln Glu Glu Leu Asp Ala Ala Gln
54       210                215                220
55 Thr Lys Thr Thr Val Cys Asp Leu Phe Arg Asn Pro Ser Met Arg Lys
56  225                230                235                240
57 Arg Ile Cys Ile Leu Val Phe Leu Arg Lys Lys Ile Ser Arg Lys Arg
58                 245                250                255
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,235

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\I674235.raw

```
59 His Lys Asn Asp Cys Tyr Thr Lys Val Thr Lys Phe
60              260                265
62 <210> SEQ ID NO: 2
63 <211> LENGTH: 236
64 <212> TYPE: PRT
65 <213> ORGANISM: Homo sapiens
67 <400> SEQUENCE: 2
68 Met Ala Glu Pro Ser Ala Ala Thr Gln Ser His Ser Ile Ser Ser Ser
69   1               5                  10                  15
70 Ser Phe Gly Ala Glu Pro Ser Ala Pro Gly Gly Gly Gly Ser Pro Gly
71              20                25                30
72 Ala Cys Pro Ala Leu Gly Thr Lys Ser Cys Ser Ser Ser Cys Ala Val
73              35                40                45
74 His Asp Leu Ile Phe Trp Arg Asp Val Lys Lys Thr Gly Phe Val Phe
75         50                55                60
76 Gly Thr Thr Leu Ile Met Leu Leu Ser Leu Ala Ala Phe Ser Val Ile
77   65                70                75                80
78 Ser Val Val Ser Tyr Leu Ile Leu Ala Leu Leu Ser Val Thr Ile Ser
79              85                90                95
80 Phe Arg Ile Tyr Lys Ser Val Ile Gln Ala Val Gln Lys Ser Glu Glu
81              100               105               110
82 Gly His Pro Phe Lys Ala Tyr Leu Asp Val Asp Ile Thr Leu Ser Ser
83         115               120               125
84 Glu Ala Phe His Asn Tyr Met Asn Ala Ala Met Val His Ile Asn Arg
85         130               135               140
86 Ala Leu Lys Leu Ile Ile Arg Leu Phe Leu Val Glu Asp Leu Val Asp
87 145               150               155               160
88 Ser Leu Lys Leu Ala Val Phe Met Trp Leu Met Thr Tyr Val Gly Ala
89              165               170               175
90 Val Phe Asn Gly Ile Thr Leu Leu Ile Leu Ala Glu Leu Leu Ile Phe
91              180               185               190
92 Ser Val Pro Ile Val Tyr Glu Lys Tyr Lys Thr Gln Ile Asp His Tyr
93         195               200               205
94 Val Gly Ile Ala Arg Asp Gln Thr Lys Ser Ile Val Glu Lys Ile Gln
95     210               215               220
96 Ala Lys Leu Pro Gly Ile Ala Lys Lys Lys Ala Glu
97 225               230               235
99 <210> SEQ ID NO: 3
100 <211> LENGTH: 261
101 <212> TYPE: PRT
102 <213> ORGANISM: Homo sapiens
104 <400> SEQUENCE: 3
105 Met Ala Gly Pro Glu Leu Leu Leu Asp Ser Asn Ile Arg Leu Trp Val
106   1               5                  10                  15
107 Val Leu Pro Ile Val Ile Ile Thr Phe Phe Val Gly Met Ile Arg His
108              20                25                30
109 Tyr Val Ser Ile Leu Leu Gln Ser Asp Lys Lys Leu Thr Gln Glu Gln
110          35                40                45
111 Val Ser Asp Ser Gln Val Leu Ile Arg Ser Arg Val Leu Arg Glu Asn
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,235

DATE: 01/04/2001
TIME: 09:01:20

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\I674235.raw

```
112        50                   55                    60
113 Gly Lys Tyr Ile Pro Lys Gln Ser Phe Leu Thr Arg Lys Tyr Tyr Phe
114 65                   70                   75                   80
115 Asn Asn Pro Glu Asp Gly Phe Phe Lys Lys Thr Lys Arg Lys Val Val
116                  85                   90                   95
117 Pro Pro Ser Pro Met Thr Asp Pro Thr Met Leu Thr Asp Met Met Lys
118                 100                  105                  110
119 Gly Asn Val Thr Asn Val Leu Pro Met Ile Leu Ile Gly Gly Trp Ile
120             115                  120                  125
121 Asn Met Thr Phe Ser Gly Phe Val Thr Thr Lys Val Pro Phe Pro Leu
122         130                  135                  140
123 Thr Leu Arg Phe Lys Pro Met Leu Gln Gln Gly Ile Glu Leu Leu Thr
124 145                  150                  155                  160
125 Leu Asp Ala Ser Trp Val Ser Ser Ala Ser Trp Tyr Phe Leu Asn Val
126                 165                  170                  175
127 Phe Gly Leu Arg Ser Ile Tyr Ser Leu Ile Leu Gly Gln Asp Asn Ala
128                 180                  185                  190
129 Ala Asp Gln Ser Arg Met Met Gln Glu Gln Met Thr Gly Ala Ala Met
130             195                  200                  205
131 Ala Met Pro Ala Asp Thr Asn Lys Ala Phe Lys Thr Glu Trp Glu Ala
132         210                  - 215                  220
133 Leu Glu Leu Thr Asp His Gln Trp Ala Leu Asp Asp Val Glu Glu Glu
134 225                  230                  235                  240
135 Leu Met Ala Lys Asp Leu His Phe Glu Gly Met Phe Lys Lys Glu Leu
136                 245                  250                  255
137 Gln Thr Ser Ile Phe
138                 260
140 <210> SEQ ID NO: 4
141 <211> LENGTH: 328
142 <212> TYPE: PRT
143 <213> ORGANISM: Homo sapiens
145 <400> SEQUENCE: 4
146 Met Val Ser Lys Ala Leu Leu Arg Leu Val Ser Ala Val Asn Arg Arg
147  1                   5                   10                  15
148 Arg Met Lys Leu Leu Leu Gly Ile Ala Leu Leu Ala Tyr Val Ala Ser
149                  20                   25                   30
150 Val Trp Gly Asn Phe Val Asn Met Ser Phe Leu Leu Asn Arg Ser Ile
151             35                   40                   45
152 Gln Glu Asn Gly Glu Leu Lys Ile Glu Ser Lys Ile Glu Glu Met Val
153         50                   55                   60
154 Glu Pro Leu Arg Glu Lys Ile Arg Asp Leu Glu Lys Ser Phe Thr Gln
155 65                   70                   75                   80
156 Lys Tyr Pro Pro Val Lys Phe Leu Ser Glu Lys Asp Arg Lys Arg Ile
157                  85                   90                   95
158 Leu Ile Thr Gly Gly Ala Gly Phe Val Gly Ser His Leu Thr Asp Lys
159                 100                  105                  110
160 Leu Met Met Asp Gly His Glu Val Thr Val Val Asp Asn Phe Phe Thr
161             115                  120                  125
162 Gly Arg Lys Arg Asn Val Glu His Trp Ile Gly His Glu Asn Phe Glu
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,235

DATE: 01/04/2001
TIME: 09:01:20

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\I674235.raw

```
163       130                     135                        140
164 Leu Ile Asn His Asp Val Val Glu Pro Leu Tyr Ile Glu Gly Val Glu
165 145                   150                  155                160
166 Val Arg Val Ala Arg Ile Phe Asn Thr Phe Gly Pro Arg Met His Met
167               165                   170                  175
168 Asn Asp Gly Arg Val Val Ser Asn Phe Ile Leu Gln Ala Leu Gln Gly
169               180                   185                  190
170 Glu Pro Leu Thr Val Tyr Gly Ser Gly Ser Gln Thr Arg Ala Phe Gln
171           195                   200                  205
172 Tyr Val Ser Asp Leu Val Asn Gly Leu Val Ala Leu Met Asn Ser Asn
173       210                   215  .                220
174 Val Ser Ser Pro Val Asn Leu Gly Asn Pro Glu Glu His Thr Ile Leu
175 225                   230                  235                240
176 Glu Phe Ala Gln Leu Ile Lys Asn Leu Val Gly Ser Gly Ser Glu Ile
177               245                   250                  255
178 Gln Phe Leu Ser Glu Ala Gln Asp Asp Pro Gln Lys Arg Lys Pro Asp
179               260       .           265                  270
180 Ile Lys Lys Ala Lys Leu Met Leu Gly Trp Glu Pro Val Val Pro Leu
181           275                   280                  285
182 Glu Glu Gly Leu Asn Lys Ala Ile His Tyr Phe Arg Lys Glu Leu Glu
183       290                   295                  300
184 Tyr Gln Ala Asn Asn Gln Tyr Ile Pro Lys Pro Lys Pro Ala Arg Ile
185 305                   310                  315                320
186 Lys Lys Gly Arg Thr Arg His Ser
187                   325
189 <210> SEQ ID NO: 5
190 <211> LENGTH: 300
191 <212> TYPE: PRT
192 <213> ORGANISM: Homo sapiens
194 <400> SEQUENCE: 5
195 Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Leu Pro Leu Leu Ile Val
196   1               5                  10                  15
197 Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg Arg Lys
198               20                   25                  30
199 Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
200           35                   40                  45
201 Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys Ser Lys Leu Val
202       50                   55                  60
203 Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu Thr Ala Ala Lys Cys
204 65                   70                  75                80
205 Lys Gly Leu Gly Ala Lys Val His Thr Phe Val Val Asp Cys Ser Asn
206               85                   90                  95  .
207 Arg Glu Asp Ile Tyr Ser Ser Ala Lys Lys Val Lys Ala Glu Ile Gly
208               100                  105                  110
209 Asp Val Ser Ile Leu Val Asn Asn Ala Gly Val Val Tyr Thr Ser Asp
210           115                  120                  125
211 Leu Phe Ala Thr Gln Asp Pro Gln Ile Glu Lys Thr Phe Glu Val Asn
212       130                  135                  140
213 Val Leu Ala His Phe Trp Thr Thr Lys Ala Phe Leu Pro Ala Met Thr
```

RAW SEQUENCE LISTING   DATE: 01/04/2001
PATENT APPLICATION: US/09/674,235   TIME: 09:01:20

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\I674235.raw

```
214 145                  150                 155                 160
215 Lys Asn Asn His Gly His Ile Val Thr Val Ala Ser Ala Ala Gly His
216                  165                 170                 175
217 Val Ser Val Pro Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala
218             180                 185                 190
219 Val Gly Phe His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile
220             195                 200                 205
221 Thr Gly Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly
222         210                 215                 220
223 Phe Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu
224 225                 230                 235                 240
225 Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys Met
226                 245                 250                 255
227 Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu Arg Ile
228             260                 265                 270
229 Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile Ser Val Lys
230         275                 280                 285
231 Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln
232         290                 295                 300
234 <210> SEQ ID NO: 6
235 <211> LENGTH: 182
236 <212> TYPE: PRT
237 <213> ORGANISM: Homo sapiens
239 <400> SEQUENCE: 6
240 Met Lys Gly Trp Gly Trp Leu Ala Leu Leu Leu Gly Ala Leu Leu Gly
241   1               5                  10                  15
242 Thr Ala Trp Ala Arg Arg Ser Gln Asp Leu His Cys Gly Ala Cys Arg
243             20                  25                  30
244 Ala Leu Val Asp Glu Leu Glu Trp Glu Ile Ala Gln Val Asp Pro Lys
245         35                  40                  45
246 Lys Thr Ile Gln Met Gly Ser Phe Arg Ile Asn Pro Asp Gly Ser Gln
247     50                  55                  60
248 Ser Val Val Glu Val Pro Tyr Ala Arg Ser Glu Ala His Leu Thr Glu
249 65                  70                  75                  80
250 Leu Leu Glu Glu Ile Cys Asp Arg Met Lys Glu Tyr Gly Glu Gln Ile
251                 85                  90                  95
252 Asp Pro Ser Thr His Arg Lys Asn Tyr Val Arg Val Val Gly Arg Asn
253             100                 105                 110
254 Gly Glu Ser Ser Glu Leu Asp Leu Gln Gly Ile Arg Ile Asp Ser Asp
255         115                 120                 125
256 Ile Ser Gly Thr Leu Lys Phe Ala Cys Glu Ser Ile Val Glu Glu Tyr
257     130                 135                 140
258 Glu Asp Glu Leu Ile Glu Phe Phe Ser Arg Glu Ala Asp Asn Val Lys
259 145                 150                 155                 160
260 Asp Lys Leu Cys Ser Lys Arg Thr Asp Leu Cys Asp His Ala Leu His
261             165                 170                 175
262 Ile Ser His Asp Glu Leu
263             180
265 <210> SEQ ID NO: 7
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VERIFICATION SUMMARY   DATE: 01/04/2001
PATENT APPLICATION: US/09/674,235   TIME: 09:01:21

        Input Set : A:\PTO.txt
        Output Set: N:\CRF3\01042001\I674235.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:705 M:361 W: Invalid Split Codon, Sequence data for SEQ ID#: 21
L:1208 M:112 C: (48) String data converted to lower case,